

REMARKS

Claims 1, 2, and 5-22 remain pending in this application. By this amendment, Applicants have amended claims 1, 2, 7, 9, 11-15, 17-20, and 22. The amendments to claims 1, 2, 7, 9, 11-15, 17-20, and 22 are supported in the originally filed application, e.g., in the as-filed specification at page 29, line 27 through page 30, line 18, and page 17, lines 2-22. No new matter has been added.

Applicants have amended claim 13 to correct the cited informality, thereby obviating the basis for the objection to this claim.

Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. §103(a) rejection of claims 1, 2, and 5-21 over Sebastian (US Patent No. 5,552,995) in view of Shebini (US Patent No. 4,858,146), and "Repairing CAD Models" by Gill Barequet et al. ("Barequet"). The Office Action apparently asserts that Sebastian teaches all of the features of claims 1-2 and 5-21, except 1) a database accumulating technical conditions; and 2) the errors determined using a corresponding surface group include at least one of a change of a number of configuring surfaces, a change in direction or quantity of border lines, reversal of a direction of a surface, and folding of a surface. The Office Action, however, relies on Shebini as allegedly disclosing the database accumulating technical conditions and relies on Barequet as allegedly teaching to determine errors using a corresponding surface group. The Office Action further asserts that it would have been obvious to combine the disclosures of Sebastian, Shebini, and Barequet.

As explained below, the cited references, taken alone or in combination, do not disclose or suggest all of the elements recited in the independent claims, including, for

example, “creat[ing] a corresponding surface group in accordance with user input of a correspondence between the part shape models corresponding to the respective selected unit work history data; [and] determin[ing], using the corresponding surface group, errors in the combined shape model arising from the second reference surface,” as recited in amended claim 1 and similarly in amended claims 2, 7, 9, 11-15, and 17-20, and “sequentially reproducing the selected unit work history data one by one,” as recited in amended claim 1 and similarly in amended claims 2, 7, 9, 11-15, and 17-20.

The Office Action, at page 5, asserts that “the independent claims recite ***which errors are identified***, and by ***not describing the error identifying algorithm***, it is clear that according to the basic principles of claim construction, the invention is not limited to any particular type of error identifying algorithm.” Applicants respectfully disagree. Amended claim 1 recites “creat[ing] a corresponding surface group in accordance with user input of a correspondence between the part shape models corresponding to the respective selected unit work history data; [and] determin[ing], using the corresponding surface group, errors in the combined shape model arising from the second reference surface.” Amended claims 2, 7, 9, 11-15, and 17-20 recite similar subject matter. Thus, the independent claims recite an error identifying algorithm that relies on the use of a corresponding surface group created “in accordance with user input of a correspondence between the part shape models corresponding to the respective selected unit work history data.”

The cited references do not disclose or suggest this feature. Barequet teaches, as the Office Action acknowledges at page 6, only the “identification of errors in ‘a single

CAD model representation,” and therefore does not disclose or suggest the use of the claimed corresponding surface group for identifying errors.

The Office Action, at page 19, cites column 11, line 55, through column 12, line 11 of Sebastian as allegedly disclosing “creat[ing] a corresponding surface group” and column 22, lines 21-65, of Sebastian as allegedly disclosing “determin[ing], using the corresponding surface group, errors in the combined shape model arising from the second reference surface.” Column 11, line 55, through column 12, line 11 of Sebastian, however, merely discloses the hierarchical structure of the templates of Sebastian, and is silent regarding “creat[ing] a corresponding surface group in accordance with user input of a correspondence between the part shape models corresponding to the respective selected unit work history data.” The Office Action fails to articulate how this section of Sebastian purportedly provides any disclosure of the creation of a corresponding surface group. Column 22, lines 21-65 of Sebastian disclose only an error based on “the thickness exceed[ing] the manufacturer’s recommendation,” *Sebastian* col. 22, lines 37-38, and not “determin[ing], using the corresponding surface group, errors in the combined shape model arising from the second reference surface.” Thus, Sebastian does not disclose or suggest either the creation of a corresponding surface group as claimed, or the use of such a corresponding group to determine errors in a combined shape model.

Shebini discloses the use of a database for the storage of finite element model components, and is silent on techniques for determining errors in shape models. Shebini, therefore, fails to disclose the claim features, described above, missing from Sebastian and Barequet.

The claim feature “sequentially reproducing the selected unit work history data one by one,” as recited in amended claim 1, and similarly in amended claims 2, 7, 9, 11-15, and 17-20, is also not disclosed or suggested by the cited references. The amended claim recitation: “sequentially reproducing the selected unit work history data one by one,” requires sequentially stepping through individual design procedures that make up the unit work history, e.g., as detailed in the instant specification at page 17, lines 13-26.

The Office Action, at pages 9-12, asserts that Sebastian, at col. 12, lines 39-57 and Figs. 2A and 2B, “clearly teaches forming a ‘combined shape model’ by joining part shape models corresponding to the respective selected work history data.” The Office Action at page 12 further describes the teaching of Sebastian as follows: “The definition of the Plastic_Molded_Box_System comprises a *sequence* of feature templates, each feature template representing stored ‘unit work history data,’ and some of the feature templates representing ‘part shape models corresponding to the respective selected work history data.’” Thus, as Office Action describes, Sebastian teaches a sequence of whole feature templates. In contrast, amended claim 1 recites that the data of a selected unit work history are sequentially reproduced, one by one, and not as an entire unit, as the Office Action alleges the disclosure of Sebastian to teach. Sebastian does not disclose or suggest sequentially reproducing unit work history data one by one. Shebini and Barequet also do not disclose or suggest this feature.

Because the cited references, taken alone or in combination, do not disclose all of the features recited in the independent claims 1, 2, 7, 9, 11-15, and 17-20, e.g., “creat[ing] a corresponding surface group in accordance with user input of a

correspondence between the part shape models corresponding to the respective selected unit work history data; [and] determin[ing], using the corresponding surface group, errors in the combined shape model arising from the second reference surface," and "sequentially reproducing the unit work history one by one," as recited in claim 1, these independent claims should be allowable. Claims 5, 6, 8, 10, 16, and 21 variously depend from the independent claims, and are also allowable for at least the same reasons.

Applicants also respectfully request reconsideration and withdrawal of the 35 U.S.C. §103(a) rejection of claim 22 over Sebastian in view of Barequet. Independent claim 22 includes recitations similar to those mentioned above in connection with independent claims 1, 2, 7, 9, 11-15, 17-20, and is therefore allowable over the cited references for at least similar reasons.

Applicants respectfully request that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing this application in condition for allowance, or in better form for appeal. Applicants submit that the proposed amendments to the independent claims do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and the relationships claimed should have been previously considered during examination. Therefore, this Amendment should allow for immediate action by the Examiner. In view of the foregoing amendments and remarks, Applicants submit that all of the pending claims are allowable. Applicants therefore request the entry of this Amendment, the Examiner's reconsideration of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge
any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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